**IN THE UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF DELAWARE**

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| ILLUMINA, INC.,<br><br>Plaintiff,<br><br>v.<br><br>GUARDANT HEALTH, INC.; HELMY ELTOUKHY; and AMIRALI TALASAZ,<br><br>Defendants. | C.A. No. _____<br><br>**DEMAND FOR JURY TRIAL** |

# COMPLAINT

Plaintiff Illumina, Inc. ("Illumina") files this Complaint for correction of inventorship, trade secret misappropriation, and breach of contract against Guardant Health, Inc. ("Guardant"), Helmy Eltoukhy ("Eltoukhy"), and AmirAli Talasaz ("Talasaz") (collectively, "Defendants"). All allegations herein are made on information and belief except where otherwise indicated.

## OVERVIEW

1. This is a civil action for correction of inventorship under the patent laws of the United States, 35 U.S.C. § 256; for Defendants' misappropriation of Illumina's trade secrets in violation of California's Uniform Trade Secrets Act, Cal. Civ. Code § 3426 et. seq. ("CUTSA"); and for breaches of contract by Eltoukhy and Talasaz.

2. Eltoukhy and Talasaz were Illumina employees. Through their employment at Illumina, they had access to Illumina's confidential information. Eltoukhy and Talasaz had contractual and other obligations to Illumina, including to protect Illumina's confidential information and to assign to Illumina rights in any inventions related to Illumina's business that they made while employed by Illumina.

3. While employed by Illumina, Eltoukhy and Talasaz founded Guardant. Eltoukhy and Talasaz misappropriated Illumina's confidential information to Guardant and filed patent applications for Guardant based on Illumina's intellectual property. Eltoukhy even helped to prepare patent claims while an Illumina employee, using Illumina information and equipment to do so. Yet the applications reflecting those claims and the resulting patents were improperly assigned to Guardant rather than Illumina.

**PARTIES**

4. Plaintiff Illumina is a corporation organized and existing under Delaware law with its principal place of business at 5200 Illumina Way, San Diego, California 92122. Illumina employs over 8,500 people worldwide.

5. Illumina was founded in 1998 by scientists at the forefront of the genetic revolution leading up to the mapping of the human genome.[1] Since its founding, Illumina's ground-breaking innovations have fueled advances in this field. For example, in the 1990s through early 2000s, the "Human Genome Project" produced the first single complete human genome sequence, which took 13 years and $3 billion. Illumina's cutting-edge DNA sequencing devices and methods now permit the sequencing of a genome in a matter of hours for approximately $600.

6. Illumina researches, develops, and manufactures life science tools and integrated systems for genetic analysis.[2] Illumina's mission is to improve human health by unlocking the

[1] Alice Park, *Time 100 Most Influential Companies: Illumina*, TIME (Apr. 26, 2021), *available at* https://time.com/collection/time100-companies/5953584/illumina/ ("Park").

[2] *Illumina Fact Sheet*, ILLUMINA, *available at* https://www.illumina.com/company/about-us/fact-sheet.html (last visited on Mar. 16, 2022) ("*Illumina Fact Sheet*"); *Who We Are*, ILLUMINA, *available at* https://www.illumina.com/content/dam/illumina-marketing/documents/company/illumina-at-a-glance.pdf (last visited on Mar. 16, 2022).

power of the genome. Illumina sequencers are used in academic, commercial, and pharmaceutical labs focused on genomics work.[3] Its sequencing and microarray technologies are fueling groundbreaking innovations in life science research, genomics, and molecular diagnostics.[4] For its work, Illumina was recently named one of the "10 most innovative health companies of 2022."[5]

7. Scientists and physicians use Illumina technology in patient care and research applications ranging from cancer research and prenatal screening to food safety and vaccine development.[6] For example, an Illumina sequencer was used to sequence for the first time the entire genome of the virus behind COVID-19, which was posted on a public database so researchers could use it to develop new drugs and vaccines.[7] This enabled Moderna scientists to develop and test a vaccine to fight the virus in record time.[8]

8. Illumina spearheads cutting-edge genetic sequencing and applied genomics efforts.[9] In 2020, for example, Illumina donated machines to ten African countries so health departments could begin sequencing, some for the first time, microbes collected from patient samples to detect and identify dangerous pathogens in circulation.[10]

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[3] Park, *supra* note 1.

[4] *Illumina Fact Sheet*, *supra* note 2.

[5] Ruth Reader, "The 10 most innovative health companies of 2022," FAST COMPANY (Mar. 8, 2022), *available at* https://www.fastcompany.com/90724416/most-innovative-companies-health-2022.

[6] *Driven from the start to transform human health*, ILLUMINA, *available at* https://www.illumina.com/company.html (last visited on Mar. 16, 2022).

[7] Park, *supra* note 1.

[8] *Id.*

[9] *Id.*

[10] *Id.*

9. Illumina technology is also at the forefront of the development of cancer diagnostics. Illumina's genomics product offerings support multiple cancer research applications, including studies of DNA, RNA, epigenetics, immunotherapy, and more.[11] For example, Illumina's next-generation sequencing methods enable cancer researchers to perform whole-genome studies, targeted gene profiling, and tumor-normal comparisons, while offering the sensitivity to detect rare somatic variants, tumor subclones, and circulating DNA fragments.[12]

10. Defendant Guardant is a corporation organized and existing under Delaware law with its principal place of business at 505 Penobscot Drive, Redwood City, California 94063. Guardant operates in the field of cancer diagnostics.

11. Guardant was founded by Defendants Eltoukhy and Talasaz.

12. Defendant Eltoukhy is an individual residing in Atherton, California, and is the Chief Executive Officer of Guardant.

13. Defendant Talasaz is an individual residing in Atherton, California, and is the Chief Operating Officer of Guardant.

## JURISDICTION AND VENUE

14. This Court has subject-matter jurisdiction over this case under 28 U.S.C. § 1331 and 28 U.S.C. § 1338, and supplemental jurisdiction pursuant to 28 U.S.C. § 1367(a).

15. This Court has personal jurisdiction over Defendants. Guardant is a Delaware corporation. Eltoukhy and Talasaz incorporated Guardant in Delaware, and did so while employed by Illumina. Eltoukhy and Talasaz founded Guardant based on misappropriated confidential information from Illumina and assigned the patents at issue in this action to

[11] *This Partnership Is Personal*, ILLUMINA, *available at* https://www.illumina.com/areas-of-interest/cancer/research.html (last visited on Mar. 16, 2022).

[12] *Id.*

Guardant, a Delaware corporation. Defendants have filed and participated in patent litigation in Delaware, including *Guardant Health, Inc. v. Foundation Medicine, Inc.*, No. 1:20-cv-01580-LPS (D. Del.), and *Guardant Health, Inc. v. Foundation Medicine, Inc.*, No. 1:17-cv-01616-LPS-CJB (D. Del.). Those cases involved patents at issue in this action. Defendants Eltoukhy and Talasaz are directors and officers of Guardant who are additionally subject to jurisdiction for the causes of action herein pursuant to 10 Del. C. § 3104(c) and 10 Del. C. § 3114.

16. Venue is proper in this Court under 28 U.S.C. § 1391(b). A substantial portion of the events giving rise to this lawsuit occurred in Delaware. Eltoukhy and Talasaz founded and incorporated Guardant in Delaware based on confidential information misappropriated from Illumina and as a vehicle for holding and using the intellectual property at issue. The patents at issue in this action are assigned to Guardant, a Delaware corporation.

## STATEMENT OF FACTS

17. Illumina hired Eltoukhy in 2008 and hired Talasaz in 2009.

18. As part of their employment with Illumina, Eltoukhy and Talasaz entered into and agreed to employment contracts and company policies, including a Proprietary Information and Invention Agreement ("PIIA"), Confidentiality – Disclosure on Need-To-Know Basis Only Acknowledgement ("Confidentiality Acknowledgement"), Code of Ethics, and, at the end of their employment, a Termination Certificate.

19. The employment agreements and company policies to which Eltoukhy and Talasaz agreed required them to devote their efforts to Illumina's business, to not compete with Illumina, to avoid conflicts of interest that could compromise their loyalty to Illumina, to assign to Illumina their inventions made while employed by Illumina that are related to Illumina's business, to protect Illumina's confidential and proprietary information, to not take or use

Illumina's resources and property for their personal benefit, and to return Illumina materials to the company upon termination of their employment.

20. While employed by Illumina, and supposedly dedicating their efforts to the interests of Illumina, Eltoukhy and Talasaz laid the groundwork for their formation of Guardant.

21. While employed by Illumina, Eltoukhy and Talasaz worked on and discussed technology they would use to start Guardant, including applications of communication theory in methods and systems for quantifying single nucleotide variant tumor markers and for detecting genetic aberrations and copy number variations in cell-free DNA from a bodily sample of a subject using molecular barcodes.

22. During their employment at Illumina, Eltoukhy and Talasaz accessed confidential Illumina information and resources pertaining to Illumina's proprietary error correction methods, cell-free DNA, copy number variations, next-generation sequencing, and communication theory.

23. Eltoukhy and Talasaz used this information in Guardant's technology.

24. For example, Eltoukhy and Talasaz requested and reviewed internal Illumina presentations, solicited know-how from colleagues, and conducted research using Illumina's proprietary sequencing methods and instrumentation.

25. While employed by Illumina, Eltoukhy and Talasaz worked on a project to create a sequencing device for processing minimally invasive blood draws, including analyzing DNA, with molecular barcodes, for cancer diagnostics and other applications.

26. On December 9, 2011, while still employed by Illumina, Eltoukhy and Talasaz anonymously incorporated Guardant as a Delaware corporation.

27. While employed by Illumina, Eltoukhy and Talasaz participated in activities related to the establishment and operation of their new company, Guardant.

28. In June 2012, Talasaz submitted his resignation to Illumina. His final day as an Illumina employee was June 25, 2012.

29. Talasaz began working at Guardant immediately after leaving Illumina.

30. Talasaz also became a founding member of the Board of Directors for Guardant immediately after leaving Illumina.

31. Eltoukhy remained employed by Illumina until January 2013.

32. While Eltoukhy was still employed by Illumina, Eltoukhy worked closely with Talasaz on projects and technologies for Guardant.

33. While Eltoukhy was still employed by Illumina, Eltoukhy and Talasaz created business plans and PowerPoint presentations, secured licenses to intellectual property, attracted investors, and developed Guardant technologies.

34. While Eltoukhy was still employed by Illumina, Guardant assigned Eltoukhy a "GuardantHealth.com" email account.

35. While Eltoukhy was still employed by Illumina, Guardant assigned Eltoukhy an email signature designating him as a co-founder of Guardant.

36. While Eltoukhy was still employed by Illumina, Guardant identified Eltoukhy as part of the Guardant "Team."

37. While Eltoukhy was still employed by Illumina, Eltoukhy acted as a member of the Board of Directors of Guardant and an advisor to Guardant. At the time, Talasaz was the only other member of the Board of Directors of Guardant.

38. Eltoukhy has subsequently described his role at Guardant during the second half of 2012, while he was still employed by Illumina, as that of a corporate agent and fiduciary of Guardant.

39. At the time, Eltoukhy did not inform Illumina that he was acting as a corporate agent and fiduciary of Guardant.

40. On June 27, 2012, two days after Talasaz left Illumina, Eltoukhy sent an email to another Illumina employee, Frank Steemers, who was a senior Illumina director and researcher working on sequencing technology.

41. In that June 27, 2012 email, Eltoukhy requested a copy of a specific presentation containing confidential Illumina information concerning random coding improvement in error rate for use in genetic sequencing to obtain better accuracy from fewer sequence reads.

42. In the email, Eltoukhy said he was thinking about creating some Matlab models for some communication theory ideas he had on how to decode barcodes more effectively.

43. Although Eltoukhy used his Illumina email address, his question did not relate to work he was carrying out for Illumina.

44. Eltoukhy later admitted in deposition that he was not working on how to decode bar codes more effectively as part of his work for Illumina.

45. Eltoukhy failed to indicate to Steemers that the Matlab models and communication theory ideas that Eltoukhy referenced in his June 27, 2012 email were being worked on by Eltoukhy for a company other than Illumina.

46. In response to Eltoukhy's June 27, 2012 email, Steemers provided Eltoukhy with slides relating to the error rate improvements and communication theory ideas Eltoukhy asked about.

47. The slides sent to Eltoukhy were specifically marked "COMPANY CONFIDENTIAL—INTERNAL USE ONLY."

48. The information that Eltoukhy received reflected years of novel work by Illumina personnel, including valuable methods and data that Illumina personnel had created, that were not publicly known, and that were subject to reasonable efforts by Illumina to maintain as confidential.

49. Illumina has since learned that, without authorization or permission from Illumina, Eltoukhy promptly forwarded this information from his Illumina email account to his personal Gmail account, and then forwarded it from his personal Gmail account to Talasaz, who had by that time left Illumina and was working for Guardant.

50. Without authorization or permission from Illumina, Eltoukhy and Talasaz used the Illumina information that Eltoukhy sent to Talasaz to develop Guardant's technology, including in patent applications that issued as U.S. patents including but not limited to U.S. Patent Nos. 9,598,731 ("the '731 patent") (Exhibit A); 9,834,822 ("the '822 patent") (Exhibit B); 9,840,743 ("the '743 patent") (Exhibit C); 9,902,992 ("the '992 patent") (Exhibit D); 9,920,366 ("the '366 patent") (Exhibit E); 10,041,127 ("the '127 patent") (Exhibit F); 10,457,995 ("the '995 patent") (Exhibit G); 10,494,678 ("the '678 patent") (Exhibit H); 10,501,808 ("the '808 patent") (Exhibit I); 10,501,810 ("the '810 patent") (Exhibit J); 10,683,556 ("the '556 patent") (Exhibit K); 10,704,085 ("the '085 patent") (Exhibit L); 10,704,086 ("the '086 patent") (Exhibit M), 10,738,364 ("the '364 patent") (Exhibit N); 10,793,916 ("the '916 patent") (Exhibit O); 10,801,063 ("the '1063 patent") (Exhibit P); 10,822,663 ("the '663 patent") (Exhibit Q); 10,837,063 ("the '7063 patent") (Exhibit R); 10,870,880 ("the '880 patent") (Exhibit S); 10,876,152 ("the '152 patent") (Exhibit T); 10,876,171 ("the '171 patent") (Exhibit U); 10,876,172 ("the '172 patent") (Exhibit V); 10,883,139 ("the '139 patent") (Exhibit W); 10,889,858 ("the '858 patent") (Exhibit X); 10,894,974 ("the '974 patent") (Exhibit Y);

10,947,600 ("the '600 patent") (Exhibit Z); 10,961,592 ("the '592 patent") (Exhibit AA); 10,982,265 ("the '265 patent") (Exhibit BB); 10,995,376 ("the '376 patent") (Exhibit CC); 11,001,899 ("the '899 patent") (Exhibit DD); 11,091,796 ("the '796 patent") (Exhibit EE); 11,091,797 ("the '797 patent") (Exhibit FF); 11,118,221 ("the '221 patent") (Exhibit GG); 11,149,306 ("the '306 patent") (Exhibit HH); and 11,149,307 ("the '307 patent") (Exhibit II).

51. These Guardant patents disclose and claim the application of communication theory ideas to cancer diagnostics to lower error rates, including by calculating error probabilities and confidence scores in sequence reads using various methodologies based on communication theory, such as hidden markov, dynamic programming, support vector machine, Bayesian network, trellis decoding, Viterbi decoding, expectation maximization, Kalman filtering, and neural network methodologies.

52. At least the '731 patent, the '822 patent, the '743 patent, the '127 patent, the '995 patent, the '678 patent, the '808 patent, the '810 patent, the '556 patent, the '364 patent, the '916 patent, the '663 patent, the '7063 patent, the '171 patent, the '172 patent, the '600 patent, the '592 patent, and the '376 patent claim a priority date as early as September 4, 2012, by virtue of related patent applications.

53. In September 2012, without Illumina's permission, Eltoukhy also sent Talasaz additional Illumina material that was marked as Illumina "Company Confidential."

54. While still employed by Illumina, Eltoukhy also used Illumina computers to draft and revise patent claims for Guardant.

55. On December 15, 2012, Eltoukhy emailed draft patent claims dated August 10, 2012, from his Illumina work email to his personal Gmail account.

56. The draft claims included, among other elements, "sequencing extracellular polynucleotides from a bodily sample from a subject, wherein each of the extracellular polynucleotide are optionally attached to multiple barcodes," "comparing the resulting number for each of the regions with potential rare mutation(s) to similarly derived numbers from a control sample," "optionally filtering out reads that fail to meet a set threshold," "filtering reads with a quality score lower than a set threshold," and "the normalizing and detection is performed using one or more of hidden markov, dynamic programming, support vector machine, [and] Bayesian network."

57. Materials that Eltoukhy obtained from Illumina employees included, by way of example, Illumina's confidential and proprietary error correction methods and communication theory ideas, including methods for grouping sequence reads into families and then collapsing those reads into a single consensus sequence from the sequence reads in the families. Eltoukhy and Talasaz used this information in Guardant patent applications and claims, including in systems and methods to detect rare mutations and copy number variations.

58. For example, the '731 patent obtained by Guardant discloses embodiments for "detecting [a] tumor marker in the set of consensus sequence," "detecting [a] copy number variation of consensus sequence," or "detecting the presence of sequence variations," in which "collapsing comprises: i. grouping sequences [sic] reads sequenced from amplified progeny polynucleotides into families, each family amplified from the same tagged parent polynucleotide; and ii. determining a consensus sequence based on sequence reads in a family," and claim 1 of the '731 patent recites as an element of the claimed invention grouping sequence reads into families, and then collapsing those reads into a single consensus sequence from the sequence reads in the families. *See* Exhibit A, 7:48–8:4.

59. As another example, the ’992 patent obtained by Guardant discloses embodiments for “detecting [a] tumor marker in the set of consensus sequence,” “detecting [a] copy number variation of consensus sequence,” or “detecting the presence of sequence variations,” in which “collapsing comprises: i. grouping sequences [sic] reads sequenced from amplified progeny polynucleotides into families, each family amplified from the same tagged parent polynucleotide; and ii. determining a consensus sequence based on sequence reads in a family,” and claim 1 of the ’992 patent recites as an element of the claimed invention grouping sequence reads into families, and then collapsing those reads into a single consensus sequence from the sequence reads in the families. *See* Exhibit D, 7:60–8:16.

60. Guardant has represented that the ’992 patent “claims priority to several previously filed applications, the earliest of which was filed September 4, 2012.”

61. As another example, the ’127 patent obtained by Guardant discloses embodiments for “detecting [a] tumor marker in the set of consensus sequence,” “detecting [a] copy number variation of consensus sequence,” or “detecting the presence of sequence variations,” in which “collapsing comprises: (i) grouping sequences [sic] reads sequenced from amplified progeny polynucleotides into families, each family amplified from the same tagged parent polynucleotide; and (ii) determining a consensus sequence based on sequence reads in a family.” *See* Exhibit F, 7:46–8:2.

62. Eltoukhy made inventive contributions to the development of Guardant’s technology, including the technology claimed in Guardant’s patents and patent applications, while employed by Illumina.

63. Eltoukhy resigned from Illumina in December 2012. His final day at Illumina was January 2, 2013.

64. Eltoukhy took the position of Guardant's Chief Executive Officer immediately after leaving Illumina.

65. When Eltoukhy left Illumina, he took with him, without authority or permission, more than 51,000 Illumina-owned emails.

66. The emails that Eltoukhy took from Illumina included more than 1,400 documents specifically labeled "COMPANY CONFIDENTIAL—INTERNAL USE ONLY."

67. By taking those documents from Illumina, Eltoukhy violated his obligations under the employment contracts and company policies to which he agreed as part of his employment with Illumina.

68. Eltoukhy also took steps to conceal his unauthorized transfer of Illumina's confidential information.

69. For example, Eltoukhy used a non-Illumina email address to transmit Illumina confidential information to Guardant.

70. As another example, according to Illumina's usual practice at the time Eltoukhy ended his employment at Illumina, employees leaving the company signed certificates representing that they did not have in their possession, nor fail to return, any documents or property belonging to Illumina.

71. Eltoukhy did not disclose that he kept in his possession, and failed to return, documents belonging to Illumina.

72. As another example, on March 23, 2017, Guardant filed U.S. Patent Application No. 15/467,570, which later issued as the '743 patent (Exhibit C).

73. Both Eltoukhy and Talasaz were named as inventors of the claimed inventions of U.S. Patent Application No. 15/467,570.

74. On October 27, 2017, however, Eltoukhy's name as an inventor was removed from U.S. Patent Application No. 15/467,570.

75. Illumina did not learn of Eltoukhy's and Talasaz's removal of Illumina confidential information and breaches of contract until in or around June 2019, during the course of responding to third-party discovery requests served on Illumina in connection with patent litigation Guardant had filed in this District against Foundation Medicine, Inc. ("FMI") (*Guardant Health, Inc. v. Foundation Medicine, Inc.*, No. 1:17-cv-01616-LPS-CJB (D. Del.)) and Personal Genome Diagnostics ("PGDx") (*Guardant Health, Inc. v. Personal Genome Diagnostics, Inc.*, No. 1:17-cv-01623-LPS-CJB (D. Del.)) (collectively "the FMI litigation").

76. In April 2019, FMI served a third-party subpoena for documents and a deposition on Illumina. In May 2019, PGDx also served a third-party subpoena for documents and a deposition on Illumina.

77. In response to requests for certain communications by Eltoukhy while he was employed at Illumina, Illumina conducted a search for responsive documents.

78. Then, in June 2019, Illumina was notified that fact discovery in the FMI litigation had revealed, based on review of Guardant files and Eltoukhy's personal files, that Eltoukhy had taken the more than 51,000 Illumina documents, including more than 1,400 "COMPANY CONFIDENTIAL" documents, when he left Illumina.

79. Between August and November 2019, Eltoukhy's name as an inventor was removed from numerous additional Guardant patent applications on which Eltoukhy was originally named as an inventor, including U.S. Patent Application No. 15/872,831 (Eltoukhy removed on August 1, 2019, application issued as the '995 patent (Exhibit G)); U.S. Patent Application No. 15/978,848 (Eltoukhy removed on August 1, 2019, application issued as the

'808 patent (Exhibit I)); U.S. Patent Application No. 16/389,680 (Eltoukhy removed on October 17, 2019, application issued as the '152 patent (Exhibit T)); and U.S. Patent Application No. 15/828,099 (Eltoukhy removed on November 21, 2019, application issued as the '7063 patent (Exhibit R)).

80. On December 10, 2019, the Court in the FMI litigation issued an order finding that Eltoukhy had improperly deleted or attempted to delete information, including confidential Illumina documents, from his personal files after being deposed in the FMI litigation on April 8, 2019.

81. On or about January 10, 2020, Illumina learned from public filings in the FMI litigation that Eltoukhy had also forwarded information from Illumina employees to Eltoukhy's personal Gmail account and then to Talasaz at Guardant.

82. Guardant continues to apply for intellectual property, including patents, that use confidential, proprietary, and trade secret information that Eltoukhy and Talasaz misappropriated from Illumina and that include inventive contributions made by Illumina personnel, including Eltoukhy while he was an Illumina employee. These include, but are not limited to, U.S. Patent Application Nos. 17/210,191; 16/711,892; 16/913,965; 17/069,535; 17/410,903; 17/512,581; 17/512,587; 17/563,781; 17/563,816.

83. Guardant also continues to develop technology and products using the confidential, proprietary, trade secret information that Eltoukhy and Talasaz misappropriated from Illumina.

## COUNT I:
## DECLARATORY JUDGMENT TO CORRECT INVENTORSHIP AND OWNERSHIP UNDER 35 U.S.C. § 256

84. Illumina incorporates, repeats and re-alleges all of the paragraphs above as if fully set forth herein.

85. The ’731 patent, the ’822 patent, the ’743 patent, the ’127 patent, the ’995 patent, the ’678 patent, the ’808 patent, the ’810 patent, the ’556 patent, the ’364 patent, the ’916 patent, the ’663 patent, the ’7063 patent, the ’171 patent, the ’172 patent, the ’600 patent, the ’592 patent, the ’376 patent, the ’899 patent, the ’085 patent, the ’086 patent, the ’880 patent, the ’152 patent, the ’974 patent, the ’265 patent, the ’858 patent, the ’992 patent, the ’366 patent, the ’1063 patent, the ’139 patent, the ’221 patent, the ’306 patent, the ’307 patent, the ’796 patent, and the ’797 patent are each assigned solely to Guardant.

86. The ’731 patent, the ’822 patent, the ’743 patent, the ’127 patent, the ’995 patent, the ’678 patent, the ’808 patent, the ’810 patent, the ’556 patent, the ’364 patent, the ’916 patent, the ’663 patent, the ’7063 patent, the ’171 patent, the ’172 patent, the ’600 patent, the ’592 patent, the ’376 patent, and the ’899 patent generally relate to the concepts of detecting a mutation, generic aberrations, copy number variations, or a cancer, etc., using molecular barcoding in a sample including but not limited to cell-free DNA.

87. The ’858 patent relates to the concepts of increasing tagging efficiency of attaching double-stranded cell-free DNA to molecular barcodes for detecting a mutation, generic aberrations, copy number variations, or a cancer, etc., using molecular barcoding.

88. The ’085 patent, the ’086 patent, the ’880 patent, the ’152 patent, the ’974 patent, the ’265 patent, the ’796 patent, and the ’797 patent generally relate to increasing tagging efficiency of attaching cell-free DNA molecules to molecular barcodes for detecting a mutation, generic aberrations, copy number variations, or a cancer, etc., using molecular barcoding.

89. The ’366 patent, the ’1063 patent, the ’139 patent, the ’221 patent, the ’306 patent, and the ’307 patent generally relate to increasing tagging efficiency of attaching double-

stranded and/or cell-free DNA molecules to molecular barcodes for detecting a mutation, generic aberrations, copy number variations, or a cancer, etc., using molecular barcoding.

90. Illumina employees, including at least Eltoukhy (while employed by Illumina) and Steemers, contributed novel concepts and work to the inventions claimed in the '731 patent, the '822 patent, the '743 patent, the '127 patent, the '995 patent, the '678 patent, the '808 patent, the '810 patent, the '556 patent, the '364 patent, the '916 patent, the '663 patent, the '7063 patent, the '171 patent, the '172 patent, the '600 patent, the '592 patent, the '376 patent, the '899 patent, the '085 patent, the '086 patent, the '880 patent, the '152 patent, the '974 patent, the '265 patent, the '858 patent, the '992 patent, the '366 patent, the '1063 patent, the '139 patent, the '221 patent, the '306 patent, the '307 patent, the '796 patent, and the '797 patent. These contributions include, for example, applications of error correction methods and communication theory ideas, including in grouping sequence reads into families and then collapsing those reads into a single consensus sequence from the sequence reads in the families.

91. Eltoukhy, while employed at Illumina, received and used Illumina confidential information to collaborate with Talasaz in developing Guardant's technology, including to conceive claimed inventions of the '731 patent, the '822 patent, the '743 patent, the '127 patent, the '995 patent, the '678 patent, the '808 patent, the '810 patent, the '556 patent, the '364 patent, the '916 patent, the '663 patent, the '7063 patent, the '171 patent, the '172 patent, the '600 patent, the '592 patent, the '376 patent, the '899 patent, the '085 patent, the '086 patent, the '880 patent, the '152 patent, the '974 patent, the '265 patent, the '858 patent, the '796 patent, and the '797 patent.

92. Eltoukhy, while employed at Illumina, contributed to the conception of claimed inventions of the '731 patent, the '822 patent, the '743 patent, the '127 patent, the '995 patent,

the ’678 patent, the ’808 patent, the ’810 patent, the ’556 patent, the ’364 patent, the ’916 patent, the ’663 patent, the ’7063 patent, the ’171 patent, the ’172 patent, the ’600 patent, the ’592 patent, the ’376 patent, the ’899 patent, the ’085 patent, the ’086 patent, the ’880 patent, the ’152 patent, the ’974 patent, the ’265 patent, the ’858 patent, the ’796 patent, and the ’797 patent.

93. Eltoukhy, while employed at Illumina, contributed to the conception and reduction to practice of at least the concepts of sequencing extracellular polynucleotides from a bodily sample and mapping sequence reads derived from the sequencing onto a reference sequence in claim 10 of the ’743 patent, normalizing the numbers of families mapping to predefined regions to each other in claim 24 of the ’995 patent, using barcode sequences at least 5 nucleotides in length in claim 1 of the ’731 patent, and detecting the presence or absence of a copy number variation in claim 1 of the ’810 patent. Eltoukhy similarly contributed to the conception of claims of the ’822 patent, the ’127 patent, the ’678 patent, the ’808 patent, the ’556 patent, the ’364 patent, the ’916 patent, the ’663 patent, the ’7063 patent, the ’171 patent, the ’172 patent, the ’600 patent, the ’592 patent, the ’376 patent, and the ’899 patent, which are related to the ’743, ’995, ’731, and ’810 patents.

94. Eltoukhy, while employed at Illumina, also contributed to the conception and reduction to practice of at least the concepts of variants comprising indels or copy number variations in claim 20 of the ’880 patent and selecting a treatment based on a cell-free tumor mutation profile in claim 23 of the ’152 patent. Eltoukhy similarly contributed to the ’085 patent, the ’086 patent, the ’974 patent, the ’265 patent, the ’796 patent, and the ’797 patent, which are related to the ’880 and ’152 patents.

95. Eltoukhy, while employed at Illumina, also contributed to the conception and reduction to practice of at least the concept of selecting a sample from the group consisting of

blood, plasma, serum, urine, saliva, mucosal excretions, sputum, stool, and tears in claim 2 of the '858 patent.

96. Other Illumina employees, including at least Steemers, also contributed to the conception of claimed inventions of the '992 patent, the '366 patent, the '1063 patent, the '139 patent, the '221 patent, the '306 patent, and the '307 patent.

97. Through his agreements with Illumina, Eltoukhy assigned to Illumina his rights in the '731 patent, the '822 patent, the '743 patent, the '127 patent, the '995 patent, the '678 patent, the '808 patent, the '810 patent, the '556 patent, the '364 patent, the '916 patent, the '663 patent, the '7063 patent, the '171 patent, the '172 patent, the '600 patent, the '592 patent, the '376 patent, the '899 patent, the '085 patent, the '086 patent, the '880 patent, the '152 patent, the '974 patent, the '265 patent, the '858 patent, the '992 patent, the '366 patent, the '1063 patent, the '139 patent, the '221 patent, the '306 patent, the '307 patent, the '796 patent, and the '797 patent.

98. There is a dispute as to the correct naming of inventors on the '731 patent, the '822 patent, the '743 patent, the '127 patent, the '995 patent, the '678 patent, the '808 patent, the '810 patent, the '556 patent, the '364 patent, the '916 patent, the '663 patent, the '7063 patent, the '171 patent, the '172 patent, the '600 patent, the '592 patent, the '376 patent, the '899 patent, the '085 patent, the '086 patent, the '880 patent, the '152 patent, the '974 patent, the '265 patent, the '858 patent, the '992 patent, the '366 patent, the '1063 patent, the '139 patent, the '221 patent, the '306 patent, the '307 patent, the '796 patent, and the '797 patent, and the correct ownership of these patents.

99. Illumina requests that the Court issue a declaratory judgment correcting the inventorship of the '731 patent, the '822 patent, the '743 patent, the '127 patent, the '995 patent, the '678 patent, the '808 patent, the '810 patent, the '556 patent, the '364 patent, the '916 patent,

the ’663 patent, the ’7063 patent, the ’171 patent, the ’172 patent, the ’600 patent, the ’592 patent, the ’376 patent, the ’899 patent, the ’085 patent, the ’086 patent, the ’880 patent, the ’152 patent, the ’974 patent, the ’265 patent, the ’858 patent, the ’796 patent, and the ’797 patent to add Eltoukhy and at least Steemers as inventors pursuant to 35 U.S.C. § 256.

100. Illumina further requests that, based on the correction of inventorship to add Eltoukhy and Steemers as inventors under 35 U.S.C. § 256, and based on Eltoukhy’s and Steemers’ assignments to Illumina, the Court issue a declaratory judgment that Illumina is at least a co-owner of the ’731 patent, the ’822 patent, the ’743 patent, the ’127 patent, the ’995 patent, the ’678 patent, the ’808 patent, the ’810 patent, the ’556 patent, the ’364 patent, the ’916 patent, the ’663 patent, the ’7063 patent, the ’171 patent, the ’172 patent, the ’600 patent, the ’592 patent, the ’376 patent, the ’899 patent, the ’085 patent, the ’086 patent, the ’880 patent, the ’152 patent, the ’974 patent, the ’265 patent, the ’858 patent, the ’796 patent, and the ’797 patent.

101. Illumina requests that the Court issue a declaratory judgment correcting the inventorship of the ’992 patent, the ’366 patent, the ’1063 patent, the ’139 patent, the ’221 patent, the ’306 patent, and the ’307 patent to add at least Steemers as an inventor under its authority pursuant to 35 U.S.C. § 256.

102. Illumina further requests that, based on the correction of inventorship to add at least Steemers as an inventor under 35 U.S.C. § 256, and based on at least Steemers’ assignments to Illumina, the Court issue a declaratory judgment that Illumina is at least a co-owner of the ’992 patent, the ’366 patent, the ’1063 patent, the ’139 patent, the ’221 patent, the ’306 patent, and the ’307 patent.

**COUNT II:**
**MISAPPROPRIATION OF ILLUMINA TRADE SECRETS UNDER CALIFORNIA'S UNIFORM TRADE SECRETS ACT, CAL. CIV. CODE § 3426 ET SEQ.**
**(AGAINST ALL DEFENDANTS)**

103. Illumina incorporates, repeats, and re-alleges all of the paragraphs above as if fully set forth herein.

104. Illumina was and continues to be the owner of certain confidential and proprietary information related to protectable knowledge, methods, techniques, processes, programs, and compilations for genetic sequencing, as alleged above, which constitute trade secrets under CUTSA.

105. One example of Illumina's confidential and proprietary information that constitutes a trade secret under CUTSA are slides provided to Eltoukhy at Eltoukhy's request. Those slides included, among other things, proprietary and confidential concepts for improving error rates for random encoding using barcodes for use in genetic sequencing. This information was confidential, proprietary, and trade secret information.

106. The 51,000 documents that Eltoukhy took from Illumina when he resigned from the company also contained additional confidential, proprietary, and trade secret information of Illumina.

107. Illumina has invested substantial resources in research and development, including related to methods for improving error rates for random encoding using barcodes for use in genetic sequencing.

108. Illumina's trade secrets relate directly to areas of research and development that Illumina has been and is actively investigating.

109. Illumina has at all relevant times taken reasonable measures to maintain the secrecy of its confidential, proprietary, and trade secret information. Illumina has employed and

continues to employ stringent security measures to preserve the secrecy of its trade secrets, including by requiring employees to sign various agreements and company policies and to return any Illumina information in their possession upon termination of employment.

110. Due to the measures taken by Illumina to preserve the secrecy of its confidential, proprietary, and trade secret information relating to genetic sequencing, such information is not publicly available to others in the genetic sequencing market.

111. Illumina's confidential, proprietary and trade secret information has in the past derived and continues to derive independent economic value from not being generally known to, and not readily ascertainable through proper means by, any other person or entity who could obtain economic value from the disclosure or use of Illumina's proprietary and confidential information.

112. In violation of Illumina's rights under CUTSA, Defendants misappropriated and without authority acquired, used, and continue to use Illumina's novel, confidential, proprietary, and trade secret information as alleged in the paragraphs above.

113. Defendants knew or should have known under the circumstances that the Illumina information taken by Defendants constituted trade secrets.

114. As a direct and proximate result of Defendants' actions, Illumina has suffered and continues to suffer severe competitive harm, and significant monetary damages in excess of the jurisdictional minimum of this Court, as will be proven at trial.

115. As a direct and proximate result of Defendants' actions, Illumina has suffered actual damages, including but not limited to lost profits, in an amount to be proven at trial. Defendants have been unjustly enriched, including by avoiding the risk and investment of time,

resources, and money necessary to develop their own technology via legitimate means. At a minimum, Illumina is entitled to a reasonable royalty as compensation for Defendants' actions.

116. Defendants' misappropriation and unauthorized use of Illumina's trade secrets as described above warrant exemplary damages under California Civil Code § 3426.3(c).

117. Defendants' use of Illumina's confidential, proprietary, and trade secret information continues, for which Illumina has no adequate remedy at law. Unless and until Defendants are enjoined by Court order, Defendants will continue to retain and wrongfully use Illumina's confidential, proprietary, and trade secret information for their benefit and to Illumina's detriment.

118. Pursuant to California Civil Code § 3426.2, Illumina is entitled to an injunction against the continued misappropriation of Illumina's confidential, proprietary, and trade secret information by Defendants. Illumina is also entitled to an injunction directing Defendants to return to Illumina any and all records or information pertaining to Illumina's confidential, proprietary, and trade secret information and purge any such information from their possession, custody, or control.

119. Equity requires that Illumina's confidential, proprietary, and trade secret information, and any ensuing benefits obtained by the Defendants as a result of their misappropriation of that information, be restored to Illumina by assignment or any other available means. Pursuant to California Civil Code § 2224, Illumina is entitled to a constructive trust over the trade secret information misappropriated by Defendants and any profits, revenues, or other benefits obtained by the Defendants as a result of their utilization of such information.

120. Pursuant to California Civil Code § 3426.4, Illumina is entitled to an award of attorneys' fees for Defendants' misappropriation of trade secrets.

**COUNT III:**
**BREACH OF CONTRACT**
**(AGAINST ELTOUKHY)**

121. Illumina incorporates, repeats and re-alleges all of the paragraphs above as if fully set forth herein.

122. Eltoukhy entered and agreed to various employment contracts and company policies as part of his employment with Illumina, including the PIIA and Confidentiality Acknowledgement. The PIIA and the Confidentiality Acknowledgment constituted written, valid, enforceable, and binding contracts between Illumina and Eltoukhy. Those contracts were in effect at all relevant times.

123. Eltoukhy also was bound by Illumina's Code of Ethics, including the duty of loyalty to Illumina, the duty to refrain from taking any action or entering into any relationship that could compromise his loyalty to Illumina, and the duty not to use or give to others trade secrets or confidential information belonging to Illumina.

124. Illumina performed its obligations under these contracts, including by paying Eltoukhy all monies and other compensation owed to him.

125. Eltoukhy materially breached the PIIA, the Confidentiality Acknowledgement, and Code of Ethics, respectively, in numerous ways and at numerous times, including for example but without limitation: Eltoukhy's efforts (with Talasaz) to incorporate Guardant in 2011; Eltoukhy's acting as an advisor, corporate agent, and fiduciary of Guardant while employed by Illumina; Eltoukhy's forwarding of Illumina confidential and proprietary information outside of Illumina and to non-Illumina employees; Eltoukhy's transfer outside Illumina, including to Guardant, of thousands of Illumina proprietary documents, including more than 1,400 "COMPANY CONFIDENTIAL" documents, when he separated from Illumina in January 2013; and Eltoukhy's contribution to the development of Guardant's technology while

an employee of Illumina, including by using proprietary information provided by other Illumina personnel and drafting patent claims ultimately obtained in Guardant's name. These actions, among others, violate at least Sections 3(a), 3(b), 3(c), 3(d), 3(e), 3(h), and 3(i) of the PIIA, Paragraphs 2, 4, 5, and 9 of the Confidentiality Acknowledgement, and Sections 1 and 4 of the Code of Ethics.

126. Eltoukhy's knowing and willful misappropriation of Illumina's trade secrets also violates and breaches at least Paragraphs 1, 2, and 3 of the Illumina Termination Certificate that he signed when he separated from Illumina in January 2013.

127. Eltoukhy further breached the implied covenant of good faith and fair dealing in each of his agreements with Illumina. By acting as a corporate agent and fiduciary of Guardant while employed by Illumina, laying the groundwork for Guardant to benefit from the work of Illumina employees, concealing his and Guardant's plans from Illumina, and using the patent system to build an intellectual property portfolio for Guardant based on contributions of Illumina employees, among other actions as described herein, Eltoukhy deprived Illumina of the benefits conferred to it under the parties' agreements.

128. Illumina first learned of Eltoukhy's breaches of contract in or around June 2019.

129. As a direct and proximate result of Eltoukhy's breaches of contract, Illumina suffered significant damages in an amount to be proven at trial. Illumina is entitled to recover damages flowing from Eltoukhy's breaches and all other available remedies.

130. Illumina is also entitled to specific performance requiring Eltoukhy to assign to Illumina any and all intellectual property, including any patents and related pending patent applications, filed for or obtained by Eltoukhy and/or Guardant that derive from the use of Illumina's novel, confidential, proprietary, and or trade secret information, including through the

contributions of Illumina employees such as Eltoukhy himself while he was employed by Illumina.

131. Absent specific performance of the assignment requirement, Illumina will continue to suffer substantial, irreparable, and incalculable injury for which monetary damages will not provide adequate compensation.

**COUNT IV:**
**BREACH OF CONTRACT**
**(AGAINST TALASAZ)**

132. Illumina incorporates, repeats and re-alleges all of the paragraphs above as if fully set forth herein.

133. Talasaz entered and agreed to various employment contracts and company policies as part of his employment with Illumina, including the PIIA, the Confidentiality Acknowledgement and Code of Ethics. The PIIA, the Confidentiality Acknowledgment, and Code of Ethics constituted written, valid, enforceable, and binding contracts between Illumina and Talasaz. Those contracts were in effect at all relevant times.

134. Talasaz also was bound by Illumina's Code of Ethics, including the duty of loyalty to Illumina, the duty to refrain from taking any action or entering into any relationship that could compromise his loyalty to Illumina, and the duty not to use or give to others trade secrets or confidential information belonging to Illumina.

135. Illumina performed all its obligations under the aforementioned contracts, including by paying Talasaz all monies and other compensation owed to him.

136. Talasaz materially breached the PIIA, the Confidentiality Acknowledgement, and Code of Ethics, respectively, in numerous ways and at numerous times, including for example but without limitation: Talasaz's efforts (with Eltoukhy) to incorporate Guardant in 2011; and Talasaz knowingly receiving Illumina confidential and proprietary information from Eltoukhy

and using the same to develop Guardant's technology and intellectual property. These actions, among others, violate at least Sections 3(a), 3(b), 3(c), 3(d), 3(e), 3(h), and 3(i) of the PIIA, Paragraphs 2, 4, 5, and 9 of the Confidentiality Acknowledgement, and Sections 1 and 4 of the Code of Ethics.

137. Talasaz's knowing and willful misappropriation of Illumina's trade secrets also violates and breaches at least Paragraphs 1, 2, and 3 of the Illumina Termination Certificate that he signed when he separated from Illumina.

138. Talasaz further breached the implied covenant of good faith and fair dealing in each of his agreements with Illumina. By laying the groundwork for Guardant to benefit from the work of Illumina employees, concealing his and Guardant's plans from Illumina, and using the patent system to build an intellectual property portfolio for Guardant based on contributions of Illumina employees, among other actions as described herein, Talasaz deprived Illumina of the benefits conferred to it under the parties' agreements.

139. Illumina first learned of Talasaz's breaches of contract in or around January 2020.

140. As a direct and proximate result of Talasaz's breaches of contract, Illumina suffered significant damages in an amount to be proven at trial. Illumina is entitled to recover damages flowing from Talasaz's breaches and all other available remedies.

141. Illumina is also entitled to specific performance requiring Talasaz to assign to Illumina any and all intellectual property, including any patents and related pending patent applications, file for or obtained by Talasaz and/or Guardant that derived from the use of Illumina's novel confidential, proprietary, and or trade secret information, including through the contributions of Illumina employees such as Eltoukhy and Talasaz himself while he was employed by Illumina.

142. Absent specific performance of the assignment requirement, Illumina will continue to suffer substantial, irreparable, and incalculable injury for which monetary damages will not provide adequate compensation.

**JURY DEMAND**

143. Illumina respectfully requests a trial by jury on all issues so triable.

**REQUEST FOR RELIEF**

WHEREFORE, Illumina respectfully requests the following relief:

A. An order correcting the inventorship of the '731 patent, the '822 patent, the '743 patent, the '127 patent, "the '995 patent, the '678 patent, the '808 patent, the '810 patent, the '556 patent, the '364 patent, the '916 patent, the '663 patent, the '7063 patent, the '171 patent, the '172 patent, the '600 patent, the '592 patent, the '376 patent, the '899 patent, the '085 patent, the '086 patent, the '880 patent, the '152 patent, the '974 patent, the '265 patent, the '858 patent, the '796 patent, the '797 patent, and any related pending patent applications, including U.S. Patent Application Nos. 17/210,191; 16/711,892; 16/913,965; 17/069,535; 17/410,903; 17/512,581; 17/512,587; 17/563,781; 17/563,816, if issued as patents, to add Eltoukhy and at least Steemers as inventors on those patents;

B. An order correcting the inventorship of the '992 patent, the '366 patent, the '1063 patent, the '139 patent, the '221 patent, the '306 patent, the '307 patent, and any related pending patent applications, including U.S. Patent Application Nos. 17/210,191; 16/711,892; 16/913,965; 17/069,535; 17/410,903; 17/512,581; 17/512,587; 17/563,781; 17/563,816, if issued as patents, to add at least Steemers as an inventor on those patents;

C. An order declaring Illumina the rightful owner by assignment of the ’731 patent, the ’822 patent, the ’743 patent, the ’127 patent, the ’995 patent, the ’678 patent, the ’808 patent, the ’810 patent, the ’556 patent, the ’364 patent, the ’916 patent, the ’663 patent, the ’7063 patent, the ’171 patent, the ’172 patent, the ’600 patent, the ’592 patent, the ’376 patent, the ’899 patent, the ’085 patent, the ’086 patent, the ’880 patent, the ’152 patent, the ’974 patent, the ’265 patent, the ’858 patent, the ’992 patent, the ’366 patent, the ’1063 patent, the ’139 patent, the ’221 patent, the ’306 patent, the ’307 patent, the ’796 patent, the ’797 patent, and any related pending patent applications, including U.S. Patent Application Nos. 17/210,191; 16/711,892; 16/913,965; 17/069,535; 17/410,903; 17/512,581; 17/512,587; 17/563,781; 17/563,816, if issued as patents;

D. Specific performance of Eltoukhy’s and Talasaz’s contractual obligations to assign to Illumina all intellectual property rights obtained by Eltoukhy, Talasaz, and/or Guardant from the use of Illumina’s proprietary, confidential, and trade secret information;

E. Immediate assignment, transfer, and return of all right, title, and interest in the trade secrets misappropriated by Defendants, and all other Illumina confidential information misused by Defendants, in all forms and in all manners in which it now exists, whether in paper or electronic form or in any other tangible or intangible entitlement or format, so that Illumina retains all legal and equitable rights therein.

F. An order directing the assignment of any and all intellectual property and other rights that Defendants sought or obtained to inventions embodying or constituting Illumina

trade secrets (whether or not Defendants' acts have destroyed trade secret rights in such information) or confidential information;

G. The entry of judgment in Illumina's favor and against all Defendants on the CUTSA claims;

H. The entry of judgment in Illumina's favor and against Eltoukhy and Talasaz on the breach of contract claims;

I. An award of damages in an amount to be proven at trial, including but not limited to actual losses, unjust enrichment (including but not limited to disgorgement of Defendants' ill-gained profits), lost profits, and/or imposition of a reasonable royalty, and further including exemplary damages, as applicable;

J. Temporary, preliminary, and permanent injunctive relief against all Defendants;

K. An award of punitive damages;

L. An order directing Defendants to purge any and all records of Illumina trade secrets or confidential information from their possession, custody, or control;

M. A constructive trust for the benefit of Illumina to be imposed upon all funds, assets, revenues, and profits derived from misappropriation of Illumina's trade secret information;

N. An award of attorneys' fees and costs;

O. An award of pre-judgment and post-judgment interest; and

P. Such other relief as the Court deems just and proper.

ASHBY & GEDDES

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